Punnada Sridilok 6304641241

#1 Demonstrate how PCC with varying price Py, (Px and Income are fixed) can give us the price elasticity of Y to be equal to, less than, or greater than 1 in absolute value

#2

7. A college student has two options for meals: eating at the dining hall for $6 per meal, or eating a Cup O' Soup for $1.50 per meal. Her weekly food budget is $60.

   a. Draw the budget constraint showing the trade-off between dining-hall meals and Cups O' Soup. Assuming that she spends equal amounts on both goods, draw an indifference curve showing the optimum choice. Label the optimum as point A.

   b. Suppose the price of a Cup O' Soup now rises to $2. Using your diagram from part (a), show the consequences of this change in price. Assume that our student now spends only 30 percent of her income on dining-hall meals. Label the new optimum as point B.

   c. What happened to the quantity of Cups O' Soup consumed as a result of this price change? What does this result say about the income and substitution effects? Explain.

   d. Use points A and B to draw a demand curve for Cup O' Soup. What is this type of good called?

#3

11. Economist George Stigler once wrote that, according to consumer theory, "if consumers do not buy less of a commodity when their incomes rise, they will surely buy less when the price of the commodity rises." Explain this statement using the concepts of income and substitution effects.

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1. Calculate the price elasticity of y :

$$|n_y| = \frac{\% \Delta y}{\% \Delta P_y} = 1$$

$$\% \Delta P_y = \frac{\Delta P_y}{\frac{3}{2} P_y} = \frac{P_y}{\frac{3}{2} P_y} = \frac{2}{3} \qquad \% \Delta y = \frac{-y_0/2}{3/4\, y_0} = -\frac{2}{3}$$

$$\therefore n_y = \frac{-2/3}{2/3} = -1$$

$$\frac{P_1 + P_0}{2} = \frac{3P_y}{2} = \frac{3}{2} P_y$$

at E > G $|n_y| > 1$

$|n_y| < 1$

$|n_y| = |-1| = 1$ (E > F)

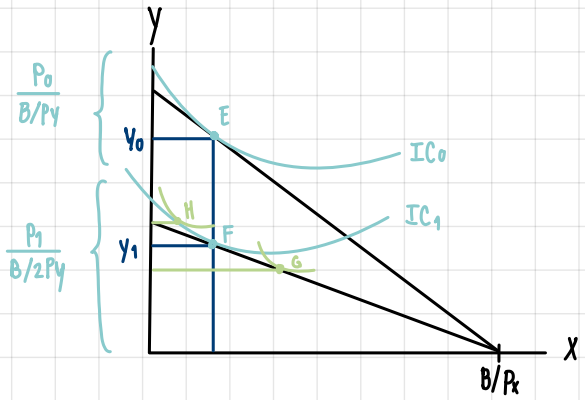
$P_0 = P_y$

$P_1 = 2P_y$

$\Delta P_y = P_1 - P_0 = 2P_y - P_y = P_y$

$$y_1 = \frac{y_0}{2}, \quad y_0 \quad \Delta y = y_1 - y_0 = \frac{y_0}{2} - y_0 = \frac{-y_0}{2}$$

$$\frac{y_1 + y_0}{2} = \frac{y_0/2 + y_0}{2} = \frac{3}{4} y_0$$



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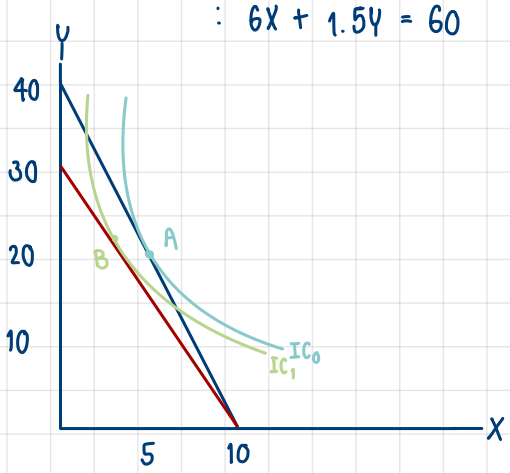
2.

a) Let X = dining-hall meals
Let y = Cup o' soup

Budget line : $P_x X + P_y Y = B$

: $6X + 1.5Y = 60$



Find IC_0

$6X = 30 \rightarrow X = 5$

$1.5Y = 30 \rightarrow Y = 20$

$A = 5, 20$

Find IC_1

$6X = 18 \rightarrow X = 3$

$2Y = 42 \rightarrow Y = 21$

$B = (3, 21)$

b) Suppose P_y rises to \$2 → New $P_y = 2$

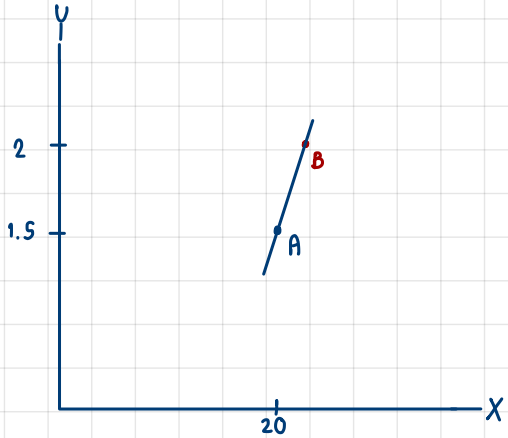
New Budget line = $6x + 2Y = 60$

Suppose the student spend 30% of income on dinning hall meal

$30\% \times 60 = 18$

$6X = 18 \rightarrow X = 3$

c) when the price changes, the student can consume one more cup of o'soup.
As it's obviously shows that the quantity of Y doesn't decrease when price increases.
It's not based on substitution effects which means the income effect takes part in this case.



d) when price of Y increase, the consumption of Y increase
∴ it is giffen goods.

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3. If the consumers do not by less of a good when their incomes rise, the good in the question must be a normal good. For a normal good, the income and Substitution effects both imply that the consumer will buy less if the price rises.